



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/695,883	10/26/2000	Masaru Fuse	2000 1489A	2985

7590 06/03/2004

Wenderoth Lind & Ponack LLP  
2033 K Street NW Suite 800  
Washington, DC 20006

EXAMINER
----------

SINGH, DALZID E

ART UNIT	PAPER NUMBER
----------	--------------

2633

DATE MAILED: 06/03/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/695,883

**Applicant(s)**

FUSE, MASARU

**Examiner**

Dalzid Singh

**Art Unit**

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.  
4a) Of the above claim(s) 3-11 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1 is/are rejected.  
7) ☒ Claim(s) 2 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election of restriction requirement in Paper No. 6 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

***Claim Objections***

2. Claim 1 is objected to because of the following informalities: In claim 1, applicant recites, "...taking a provided intermittent signal as an original signal..." It is not clear what is meant by "an original signal" Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bosotti (US Patent No. 4,267,590) in view of Netsu (US Patent No. 5,715,074).

Regarding claim 1, Bosotti teaches optical communication apparatus for transmitting optical signal from a transmitting side to a receiving side (see col. 3, lines 7-12 and Fig. 1), the apparatus comprising:

$m$  ( $m$  is a natural number not less than 2) optical transmitting circuits for sending the optical signal (in Fig. 1, Bosotti shows more than two optical transmitting circuits, for example,  $T_1$  to  $T_n$ );

$n$  ( $n$  is a natural number not less than 2) optical receiving circuits for receiving the optical signal from each of said optical transmitting circuits (in Fig. 1, Bosotti shows more than two optical receiving circuits, for example,  $R_1$  to  $R_n$ ); and

an optical transfer circuit (Fig. 1 shows optical multiplexer (MX) and optical demultiplexer (DMX) as optical transfer circuit) for connecting each of said optical transmitting circuits ( $T_1$  to  $T_n$ ) and each of said optical receiving circuits ( $R_1$  to  $R_n$ ),

wherein each of said optical transmitting circuits intermittently sends optical signals outputted by taking a provided signal as an original signal so as to prevent a collision among the optical signals (in col. 3, lines 24-30 and col. 4, lines 7-18, Bosotti teaches clock circuit controls transmission of the signal. Clock signal is a periodic signal comprising of rise and fall time (for example, rise and fall can be represented by binary value such as 1 and 0 respectively). Since transmission of the optical signal is controlled by clock signal, therefore the optical signal is transmitted only when the value of the clock signal is equal to 1. Based on this, it would have been obvious to indicate that the optical communication system of Bosotti intermittently transmit optical signal. Moreover, in col. 4, lines 3-6, Bosotti teaches the use of optical delays, which help to avoid collision of the optical signal),

said optical transfer circuit multiplexes the optical signals outputted from said optical transmitting circuits, separates the multiplexed optical signal into optical signals

Art Unit: 2633

for every predetermined wavelength corresponding to said optical receiving circuits, and individually outputs the separated optical signals from  $n$  output ports provided thereto (shown in Fig. 1, Bosotti shows optical multiplexer (MX) to multiplex the optical signal from transmitting circuits ( $T_1$  to  $T_n$ ) and optical demultiplexer (DMX) to separate the multiplexed optical signal into individually output ports corresponding to receiving circuits ( $R_1$  to  $R_n$ )),

each of said optical receiving circuits converts the optical signal outputted from a corresponding one of said output ports into an electrical signal and outputs the electrical signal (in col. 3, lines 31-36 and shown in Fig. 1, Bosotti teaches that each receiving circuit, for example,  $R_1$ , contains photodetector (FR), which converts optical signal into electrical signal and output the electrical signal to amplifier/equalizer (AE)), and

as shown in Fig. 1 and discussed in col. 3, lines 24-30, Bosotti discloses optical modulators to modulate the optical signal at different frequencies or wavelengths. At the receiving side the individual frequency or wavelength of the signal is separated and received by different receivers. For example, transmitter  $T_1$  transmits optical signal at frequency  $f_1$  and received by receiver  $R_1$ . Since a particular optical signal is directed to a particular receiver, therefore, it would have been obvious that the wavelength information of the optical signal use address (for example,  $f_1$  for  $R_1$ ) to direct information to a particular location.

Bosotti differs from the claimed invention in that Bosotti does not specifically disclose transmitting "burst optical signal" However, in optical communication system, transmitting burst optical signal is well known. Netsu is cited to show such well known

Art Unit: 2633

concept (see col. 1, lines 4-13, and col. 4, lines 23-26). Therefore, it would have been obvious to an artisan of ordinary skill in the art to modify the transmission system of Bosotti in order to transmit optical burst signal as taught by Netsu. One of ordinary skill in the art would have been motivated to do such in order to provide high intensity, high data rates and short transmission times, which enables communication between data terminal and data network operating at different data signaling rates.

### ***Allowable Subject Matter***

5. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gloge (US Patent No. 4,563,774) is cited to show address coded communication system.

Dugan (US Patent No. 5,710,650) is cited to show WDM optical fiber transceiver and method.

Doerr et al (US Patent No. 5,909,294) is cited to show WDM system using transceivers.

Art Unit: 2633

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is 703-306-5619.

The examiner can normally be reached on Mon-Fri 8am - 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703-305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DS

May 10, 2004

*Dalzid Singh*